

St. Croix Crossing

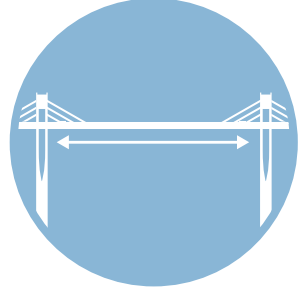
Connecting Minnesota and Wisconsin

The new St. Croix River Crossing Bridge will be the second extradosed bridge constructed in the United States.

	St. Croix Crossing	I-94 Hudson Bridge
BRIDGE TYPE	Extradosed The extradosed system is a hybrid design that is a combination of a concrete box girder bridge (I-35W in Minneapolis), and a cable-stayed bridge (Sunshine Skyway Bridge in Tampa, Fla.).	Steel Girder
DATE BUILT EASTBOUND SPAN	Open Fall 2016	Built 1995
WESTBOUND SPAN	Open Fall 2016	Reconstructed 2004 Built 1971
HIGHWAYS	36	94 12
DAILY TRAFFIC COUNT = 5,000	18,000 (2007)	82,000 (2004)

Extradosed bridges have been successfully designed and constructed for several years in both Europe and Japan. The extradosed type of bridge was selected for this project for its balance of cost, aesthetics, constructability and sensitivity to the environment.

Extradosed bridge features



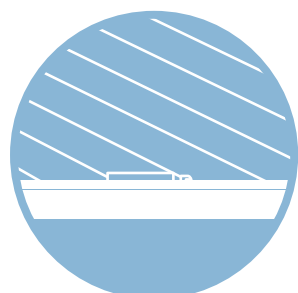
Longer Spans

An extradosed bridge lends itself to longer spans with thinner girders than a conventional girder bridge. This is a benefit for the design of the St. Croix Crossing Bridge in that longer main spans will require fewer piers in the river. Also, the longer main spans will benefit boat navigation by providing a wider navigation channel, as well as lessen impacts to the environment.



Shorter Tower Height

The tower height for the bridge is approximately 60 feet above the bridge deck, which is much less than that of a cable-stayed bridge. The new bridge towers stay "within the valley" and don't project above the river bluff. By comparison, towers for a cable-stay design would be 300 to 350 feet above the bridge deck.



Shallower Girder Depth

The girder depth of an extradosed bridge is less than that of a standard girder bridge. This allows for longer spans that do not impact the profile of the bridge deck roadway. A 16-20 foot depth box is specified for the SCC Bridge.



Cable Tension Limits

The tension in the cables of an extradosed bridge can be approximately 50 percent greater than that of a conventional cable-stayed bridge. This will result in reduced cables and a decrease in future maintenance needs for the bridge.

